

NOTES AND NEWS.

MR. WM. L. BRAY sails for Berlin about the middle of July to be abroad a year.

DR. VICTOR SCHIFFNER has been called to the professorship of systematic botany at the German University of Prague.

A LIST of the orchids grown in the Botanic Gardens of Jamaica is given in the *Bulletin of the Bot. Dept. Jamaica*, for April. It numbers 256 species belonging to eighty-one genera.

THE BOTANISTS of Vermont have organized what seems to be a very vigorous state botanical club, which held its first winter meeting last February at the Museum of the University of Vermont.

PROFS. J. C. ARTHUR and D. T. MacDougal sailed for Europe early in June. Dr. Arthur will spend the summer at Bonn with Strasburger and Prof. MacDougal at Tübingen with Vöchting.

MR. T. D. A. COCKERELL has announced the proposed establishment of a biological station in New Mexico, as a "health and holiday resort for scientific persons." He may be addressed at Las Cruces, New Mexico.

PROFESSOR E. L. GREENE, in *Pittonia* (May 16), has given a history of *Viola pedata*, var. *bicolor*; showing that the variety is really the *V. pedata* L., and that the *V. pedata* of American authors was a form discovered much later, for which he proposes the name var. *inornata*.

DR. N. L. BRITTON, professor of botany in Columbia University has been appointed director of the New York Botanical Garden, and the place so made vacant has been filled by the appointment of Dr. Lucien M. Underwood, now professor of botany in Alabama Polytechnic Institute.

PROF. W. WHITMAN BAILEY has been appointed by President Cleveland a member of the Board of Visitors to the West Point Military Academy. Prof. Bailey was born at West Point in 1843, the youngest son of Prof. J. W. Bailey the microscopist, who was a graduate of the Academy.

AN ILLUSTRATION of *Erythronium Johnsoni* Bolander, of the Coast Ranges of southern Oregon, is published in *The Gardeners' Chronicle* (May 2). In the same number the fertile cones of the African *Sequoia* (*Wellingtonia*) *gigantea* and the Californian *S. sempervirens* are illustrated, showing also individual bracts and ovules.

THE UNIVERSITY OF WISCONSIN at its summer school, July 6th-August 14th, offers laboratory courses in the physiology of plants and in general morphology of plants, both with special reference to the adaptation of the work to the high school. Special courses can also be arranged by advanced students. The work is under the direction of Prof. C. R. Barnes.

MR. C. G. LLOYD of Cincinnati, Ohio, has distributed a list of 243 fleshy and woody fungi added to his mycological museum during 1895. Mr. Lloyd is so generous in loaning his books and specimens to students, and in other ways, that his request for donations of the larger fungi, especially of such as preserve their characters when dried, should meet with a hearty response from collectors.

A *Flora of the Alps*, intended especially for English visitors, is announced for the spring of 1896, from the hand of Mr. Alfred W. Bennett, lecturer on botany at St. Thomas's Hospital, London. It is to form two octavo volumes, with 120 colored plates—not exactly a handy size, one would think, for tourists. The *Flora* will of course include many alpine plants of the adjacent mountain districts of France, Italy, and Austria.

THE NEXT VOLUME in the "Rural Science Series" will probably be Professor Bailey's monograph of *The Apple*. The work is to comprise two parts, the first treating of all the practical matters of apple-growing, and the second of such scientific matters as the botany of the apple, its history and evolution, production of new varieties, and the like. It is expected the work will be completed and ready for publication in the fall.—*Book Reviews*.

THE "Roentgen rays" are compared, in *Gardeners' Chronicle* (May 2), "with the feeble but very penetrating light given out by phosphorescent fungi." Mr. W. G. Smith records having seen the light of phosphorescent mycelia "penetrating several thicknesses of packing paper." In 1875 he "recorded the light as having been distinctly seen through two thicknesses of writing paper;" while in 1872 "the Rev. M. J. Berkeley has recorded an instance of the phosphorescent light from fungi penetrating through five thicknesses of paper, the light penetrating through all the folds on either side of the example, as if the specimen was exposed."

WE ARE INFORMED by M. Cardot that he intends sending to the National Herbarium the original types of most of the American new species of mosses already described by Renauld and himself. He also promises that in the future, whenever it is possible, a type of each new species described will be deposited in this herbarium in order that it may be readily accessible to American bryologists. We take the liberty of expressing the thanks of the students of our moss flora to MM. Renauld and Cardot, for this action, which we are sure will be highly appreciated. We wish the custom might spread among all foreigners who describe new species in any group from this country.

THE BOTANICAL COURSES offered at the summer school of the University of Pennsylvania, beginning July 6th, are as follows:

Ten lectures on "The evolution and distribution of flowering plants," by Dr. Benjamin L. Robinson of Harvard University; two lectures by Dr. John M. Macfarlane of the University of Pennsylvania, on "Timber trees in health," and "Timber trees in decay;" Five lectures on "The natural history of field and garden plants," by Dr. J. W. Harshberger of the University of Pennsylvania; five lectures on "Natural products," by Professor William P. Wilson of the Philadelphia Museums; five lectures on "Fungous diseases of plants," by Professor Byron D. Halsted, of Rutgers College.

ARTICLES of taxonomic interest in the *Journal of Botany* for May are as follows: Cape algæ, illustrated, by Ethel S. Barton; some new Polygalas from Africa, by Dr. R. Chodat; a continuation of Wainio's account of the Elliott collection of lichens from the Antilles, including numerous new species; a revision of the species of *Rosa* of the Babington herbarium, by Francois Crépin, which would serve its purpose better if translated; another fascicle of the never ending British Rubi, by Rev. Augustin Ley; several new species of African *Cyperaceæ*; and an interesting little nomenclature discussion in which our good friend the editor finds himself involved, and which must remind him of some of the strictures he has put upon our American Britton.

PROFESSOR GEORGE F. ATKINSON has been experimenting upon species of *Onoclea*, and showing "that the sporophylls can be made to assume the form and function of the foliar organs by cutting off the latter, thus disturbing the nutrition and forcing the vegetation function on the sporophylls." These results are the occasion of a paper on "The probable influence of disturbed nutrition (carbon-assimilation) on the evolution of the vegetative phase of the sporophyte," printed in *Amer. Nat.* (May), a very suggestive discussion; in which Bower's hypothesis as to the primary character of sporophylls as compared with foliage leaves is sustained, and the influence suggested by means of which carbon-assimilation was gradually transferred from the gametophyte to the sporophyte.

THE CURRENT NUMBER of *Acta Horti Petropolitani* (Vol. XIV. no. 1) contains the following papers: The Potentillas of Central Russia, by A. Petunnikov, illustrated by eleven plates, in which a full discussion of the forms and their natural relationships is given, suggesting bases of classification different from those current; a revision of the genus *Carpesium* (Compositæ), by C. Winkler; an enumeration of plants collected in the mountains of China by Putjata and Bovodowsky in 1891, by J. Palibin, among which are several new species, and the whole list bearing a North American aspect; some new Asiatic Compositæ, among which *Senecio* predominates, by C. Winkler; and notes concerning Asiatic plants, by A. Batalin, in which there are several new species and varieties of *Prunus* and *Lonicera*, and a synopsis of the species of *Dipelta* and *Incarvillea*.

THE LATEST STUDIES among North American plants, as recorded in *Bull. Torr. Bot. Club* (April), are as follows: a provisional list of the species of *Kuhnistera* (*Petalostemon*), by A. A. Heller, giving synonymy and range, and including the description of a new southern species, *K. Gattingeri*; further studies of our southeastern plants, by John K. Small, including a new *Portulaca* and a new *Nymphæa*, and disentangling *Hibiscus lasiocarpus* and *H. grandiflorus*; another presentation of the much discussed forms of *Sisyrinchium* of E. U. S., by Eugene P. Bicknell, reaching the conclusion that there are three species, *S. graminoides* (first printed *gramnoides*, a new name given to the *S. Bermudianum* of Amer. authors, and the *S. anceps* of Watson in Gray's Manual, no old name being available), *S. Atlanticum* (a new species),

and *S. angustifolium* Miller; notes on *Meibomia* (*Desmodium*), by Anna Murray Vail; some new and interesting grasses, by F. Lamson-Scribner, and others by Geo. V. Nash.

THE RELATION between calcium and the conduction of carbohydrates has been a subject of investigation by Mr. Percy Groom, who publishes his results in *Annals of Botany* (March). His summary is as follows:

"(1) Acid potassic oxalate retards the action of diastase on starch.
 (2) In the living plant the first, and, at the commencement, the only visible effect of acid potassic oxalate on the assimilating organs is the accumulation of starch, owing to an arrest of the change of the starch into sugar.

(3) The second effect, as the soluble oxalate accumulates, is a retardation of the manufacture of starch, and hence probably of the assimilation of carbon.

(4) The last effect, with increased accumulation of the oxalate, is the death of the protoplasm."

All of which indicates that the lack of calcium permits this injurious accumulation of acid potassic oxalate, which otherwise would be neutralized by the manufacture of calcium oxalate.

MACMILLAN & Co. will publish immediately an entirely new edition of *The Nursery Book*, thoroughly recast and revised by the author, Professor L. H. Bailey, of Cornell University. This little manual has been one of the most popular of all current horticultural books and has found a wide circulation both amongst nurserymen and amateurs. Many new illustrations have been made for this edition, bringing the number of cuts up to over 150. It is one of the Garden Craft Series.

The Pruning Book, now in preparation by the same author, will be the next volume in this series. Professor Bailey has been making definite experiments and observations upon this subject for a number of years, and the results of these labors are now approaching readiness for publication. An artist is now employed, under Professor Bailey's direction, in making illustrations for the book which will comprise the entire range of the theory and practice of pruning, both of fruit and ornamental trees and shrubs. It is expected to be on sale early in 1897 or before.

Macmillan & Co. also announce for early publication volume I of the Columbia University Botanical Series, entitled *Elementary Botany*, by Dr. Carlton C. Curtis, tutor in botany, Columbia University, with an introduction by Dr. N. L. Britton.

THE HOPKINS SEASIDE LABORATORY of the Leland Stanford Junior University, founded by Mr. Timothy Hopkins in 1892, opens its fifth session Monday, June 15, 1896. The regular course of instruction will continue six weeks, closing July 25th. Investigators and students working without instruction may continue their work through the summer.

The laboratory provides opportunities for investigators who are prepared to carry on researches in morphology or physiology; for students in the departments of zoology and botany in the university, who wish to supplement their work under the favorable conditions of

such an institution, and to gain a knowledge of the methods of research in biology; and for students and teachers not members of the university, who desire to pursue biological studies and to become acquainted with the practical methods of laboratory work. For the latter regular courses are conducted in zoology and botany, accompanied by lectures and by individual instruction at the work table.

The instructor in botany is Mr. Walter R. Shaw.

The laboratory is located on a low bluff immediately overlooking the beach at Pacific Grove, a seaside resort on the southern shore of Monterey Bay, two miles west of Monterey. In the immediate vicinity of the laboratory are exceptionally fine collecting grounds. To investigators prepared to carry on original work the use of the laboratory and its equipment is tendered free of charge. Other students pay a moderate fee for the term of six weeks.

The course in botany consists mainly of a comparative study of the principal groups of fresh water and marine algæ, with collateral work in other groups of plants.

THE FOLLOWING STATEMENT CONCERNING the herbarium and botanical library of Columbia University is of general botanical interest. It is taken from the announcement of the "School of Pure Science," just issued.

The herbarium contains about 500,000 specimens, being one of the largest in America; additions are at present made to it at the rate of about 20,000 specimens a year. It comprises: (1) The collections accumulated by Dr. Torrey, which came into the possession of the university at his death in 1873. (2) The collections of Professor C. F. Meisner of Basle, Switzerland, presented to the university about the time of Dr. Torrey's death, by Mr. John J. Crooke. (3) The collections of Dr. A. W. Chapman of Appalachicola, Florida, presented by Mr. Crooke at the same time, containing the types illustrating Dr. Chapman's Flora of the southern United States. (4) The mosses of the late C. F. Austin. (5) The mosses of the late Dr. J. G. Jaeger, recently acquired. (6) Miscellaneous accumulations since Dr. Torrey's death, now making up more than one-third of the whole collection. The herbarium is rich in types of species described by Dr. Torrey, Professor Meisner, Dr. Chapman, Dr. Asa Gray, Mr. Austin, Professor Britton, and Dr. Morong. The various collections are now all arranged in a single series, but each sheet is identified by a designative label or stamp. There are also extensive collections of fruits, seeds, woods, and material illustrating economic botany, placed in cases and drawers.

The portion of the university library classified under botany is shelved in the room containing the herbarium. It now contains 3,700 bound volumes and about 5,000 pamphlets and extracts. These numbers do not, however, represent the whole reference strength of the collection, for all general works, scientific journals and publications of general scientific societies are shelved in the main library. All the regularly published journals devoted to botany are received, and the sets of the most of them are complete.